

LIBBY #3

Libby Asbestos Site, Operable Unit 4 Libby, Montana

ADMINISTRATIVE
RECORD

Record of Deviation/Request for Modification Forms for the Contaminant Screening Study Sampling and Analysis Plan

September 2002



Modification Forms

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Modification No.	Description of Deviation	Date Issued	Applicable CSS Section
000032	<i>Change to IFF (version 2) and IFF Completion Guidance Documents</i>	6/10/02	<i>Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF, CDM-LIBBY-04</i>
000033	<i>Change to Index ID Numbering Procedure</i>	6/10/02	<i>Section 5.4.4</i>
000034	<i>Changes to IFF Completion Procedure</i>	6/10/02	<i>Section 4.3.3.1, 4.3.3.3, Figure 4</i>
000035	<i>Change to Rinsates Procedure</i>	6/10/02	<i>Section 7.1</i>
000036	<i>Change to Soil Field Sample Data Sheet</i>	6/10/02	<i>Section 7.1, Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF</i>
000037	<i>Change to Soil Sample Collection Procedure</i>	6/10/02	<i>Section 7.1, Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF</i>
000038	<i>Change to Structure Sketch Procedure</i>	6/29/02	<i>Section 4.3.3.2</i>
000039	<i>Change to Rinsate Preparation Procedure</i>	6/29/02	<i>Section 6.1</i>
000040	<i>Change to Rinsate Sampling Procedure</i>	6/29/02	<i>Section 5.4.2</i>
000041	<i>Change to BD# Assignment Procedure</i>	6/29/02	<i>Section 4.3.3.3</i>
000042	<i>Change to IFF (version 3)</i>	6/29/02	<i>Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF</i>
000043	<i>Change to Secondary Structure IFF Procedure</i>	6/29/02	<i>Section 4.3.3.2</i>

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Modification No.	Description of Deviation	Date Issued	Applicable CSS Section
000044	<i>Change to Equipment Decontamination Procedure</i>	7/15/02	<i>Appendix C - Site Specific SOP for Soil Sample Collection</i>
000045	<i>Change to Sample Packaging Procedure</i>	7/15/02	<i>Section 5.4.6</i>
000046	<i>Non-CSS Modification</i>	--	--
000047	<i>Non-CSS Modification</i>	--	--
000048	<i>Change to IFF (version 4)</i>	7/30/02	<i>Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF</i>
000049	<i>Change to Logbook Completion Procedure</i>	9/5/02	<i>Section 5, Appendix C – SOP 4-1</i>
000050	<i>Change to IFF Completion Procedure</i>	9/5/02	<i>Appendix C - CDM-LIBBY-04</i>
000051	<i>Change to Product Volume Estimation Procedure</i>	9/5/02	<i>Section 4.3.3.1</i>
000052	<i>Change to IFF Distribution Procedure</i>	9/5/02	<i>Section 5-5</i>
000053	<i>Change of Sampling Progress Tracking Procedure</i>	9/5/02	<i>Section 4.3.1.2</i>
000054	<i>Change to Decontamination Procedure</i>	9/5/02	<i>Appendix C - Site Specific SOP for Soil Sample Collection</i>
000055	<i>Change to FSDS</i>	9/9/02	<i>Appendix C - Site Specific Guidance Document, CSS Field Sample Data Sheet for Soil</i>
000056	<i>Change to IFF (version 5)</i>	9/9/02	<i>Appendix C – Site Specific Guidance Document, CSS Primary Structure IFF</i>

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Modification No.	Description of Deviation	Date Issued	Applicable CSS Section
<i>000057</i>	<i>Change to Duplicate Sample Collection Procedure</i>	<i>9/13/02</i>	<i>Appendix C – SOP CDM- LIBBY-05</i>
<i>000058</i>	<i>Creation of Supplemental IFF</i>	<i>9/13/02</i>	<i>Section 4.3.3.1</i>
<i>000062</i>	<i>Change to Soil Sample Preparation Method</i>	<i>11/22/02</i>	<i>Appendix C – SOP ISSI- LIBBY-01</i>

Record of Deviation/Request for Modification Forms for the Contaminant Screening Study Sampling and Analysis Plan

002

Copy Number

Mary Goldade

Issued To

This is a **controlled document**. It should be carefully maintained and kept readily available. The holder identified is responsible for maintaining this document in an up-to-date condition by incorporating new sections as they become available. This document must be returned to CDM upon any circumstance that ends the need for the document.

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Modification No.	Description of Deviation	Date Issued
000032	<i>Change to IFF (version 2) and IFF Completion Guidance Documents</i>	6/10/02
000033	<i>Change to Index ID Numbering Procedure</i>	6/10/02
000034	<i>Changes to IFF Completion Procedure</i>	6/10/02
000035	<i>Change to Rinsates Procedure</i>	6/10/02
000036	<i>Change to Soil Field Sample Data Sheet</i>	6/10/02
000037	<i>Change to Soil Sample Collection Procedure</i>	6/10/02
000038	<i>Change to Structure Sketch Procedure</i>	6/29/02
000039	<i>Change to Rinsate Preparation Procedure</i>	6/29/02
000040	<i>Change to Rinsate Sampling Procedure</i>	6/29/02
000041	<i>Change to BD# Assignment Procedure</i>	6/29/02
000042	<i>Change to IFF (version 3)</i>	6/29/02
000043	<i>Change to Secondary Structure IFF Procedure</i>	6/29/02
000044	<i>Change to Equipment Decontamination Procedure</i>	7/15/02
000045	<i>Change to Sample Packaging Procedure</i>	7/15/02
000046	<i>Non-CSS modification</i>	7/11/02
000047	<i>Non-CSS modification</i>	7/11/02

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Modification No.	Description of Deviation	Date Issued
000048	<i>Change to IFF (version 4)</i>	7/30/02
000049	<i>Change to Logbook Completion Procedure</i>	9/5/02
000050	<i>Change to IFF Completion Procedure</i>	9/5/02
000051	<i>Change to Product Volume Estimation Procedure</i>	9/5/02
000052	<i>Change to IFF Distribution Procedure</i>	9/5/02
000053	<i>Change of Sampling Progress Tracking Procedure</i>	9/5/02
000054	<i>Change to Decontamination Procedure</i>	9/5/02
000055	<i>Change to FSDS</i>	9/9/02
000056	<i>Change to IFF (version 5)</i>	9/9/02
000057	<i>Change to Duplicate Sample Collection Procedure</i>	9/13/02
000058	<i>Creation of Supplemental IFF</i>	9/13/02



Record of Deviation/ Request for Modification

to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 6/10/02

Description of Deviation:

Changes to IFF and IFF Completion Guidance Documents

Field Logbook and page number deviation is documented on: Logbook #100057 page 16

Reason for Deviation:

To collect more accurate information regarding owner/occupant
and to track properties where usable primary sources are present.

Potential Implications of this Deviation:

Additional tracking in Libby V2.

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

Add two questions to IFF ① Are primary sources present at the property?
② Where are primary sources/materials located? See
attached for changes to IFF Guidance Documents

Technical Review:

(Volpe Project Manager or designate) does not apply to CSS

Date: 6/11/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date: 6/12/02

Approved By:

(USEPA RPM, OSC, or SSC)

Title: RPM

Date: 6/11/02

[Close](#)

From: Warren, Dee

To: Montera, Jeff

Cc:

Subject: Changes to IFF and IFF Completion Guidance

Sent: 5/22/02 3:50 PM

Importance: Normal

Changes to IFF:

Two questions were removed from the occupant information section and now only appear in the CSS assessment section. These two questions are

1. Is there any knowledge of formed miners, close relative of miners, or any highly exposed persons living or visiting the property?
2. Is the resident diagnosed with an asbestos related disease?

This change was made because the questions appeared on the IFF twice.

The question: Is the resident diagnosed with an asbestos related disease? was changed to Is the resident, past or present, diagnosed with an asbestos related disease?

Two questions were added to the CSS assessment and titled "Overall Assessment". These questions were added to have a way to track if primary sources were observed anywhere on the property and the general location in which they were observed.

1. Are primary source materials present at the property? Yes or No
2. Where are primary source materials located? Inside Outside Both NA

Changes made to the IFF completion guidance document should be apparent in the attached file.

If you have any questions, please let me know.

Dee

IFF Guidance Revision 1.doc

Completion of Property Information Field Form

Project Libby Asbestos Remedial Investigation - Contaminant Screening Study (CSS)

Project No.: 3282-116

Document No.: CDM-LIBBY-04

Approved by: _____
Project Manager Date

Technical Reviewer Date

EPA Approval Date

An information field form (IFF) is to be completed for each structure located on a property. Two IFFs will be used: (1) primary structure and property assessment information field form and (2) secondary structure information field form. The IFFs are completed from both interviews with the occupant/owner and visual inspection of the structures and surrounding properties and are used to facilitate the information-gathering process (interview and visual inspection) of properties during the contaminant screening study (CSS).

Definitions:

Primary structure - Refers to the main inhabitable structure on a property or the main commercial structure on a property.

Secondary structure - Refers to structures other than the primary structure located on a property (i.e., shed, barn, detached garage with an attic, etc.). Attached garages are considered part of the primary structure.

Occupant - Refers to the person currently living in a primary residential structure or business occupying an address.

Owner - Refers to the person who owns a residential property (may or may not be the current occupant) or person who owns a commercial property.

Completion of Property Information Field Form

Primary Structure and Property Assessment Information Field Form

Each entry on the IFF should be completed following the guidance procedure, and any notes on each item should be written in the notes column to the right of each data item.

Header Information

BD#: Refers to the location identification (ID) number of the structure the IFF is being completed for. The field team obtains a list of available numbers from the sample coordinator.

Field Logbook No.: The number of the field logbook that is used to record information specific to the property being assessed on the IFF.

Page No.: The page numbers in the logbook that contain information specific to the property being assessed on the IFF.

Site Visit Date: Date of site visit, in the form MM/DD/YY.

Address: The address of the property being assessed on the IFF. Addresses are to be entered in the following format:

Street number - Direction - Street Name - Street Abbreviation

Where:

Street number = the number of the street address

Direction = the abbreviation of the street direction (N, S, E, or W), when applicable

Street name = correct spelling of the street name

Street abbreviation = when applicable

Road - Rd

Avenue - Ave

Street - St

Circle - Cr

Place - Pl

Boulevard - Blvd

Highway - Hwy

Examples: 510 N Mineral Ave
1616 Rainy Creek Rd
521 Pipe Creek Rd

Completion of Property Information Field Form

Structure Description: Description of the structure specific the IFF (i.e., house, trailer, garage, shed, barn)

Occupant: Name of current occupants or business name of the primary structure. ~~In the case of a commercial property, the occupant information would not be completed.~~

Occupant Phone number: Phone number of occupant of the primary structure.

Owner: Only needs to be completed if the owner of the structure or property is different than the current occupant (i.e., renter). Required for commercial properties.

Owner Phone number: Phone number of the owner of the property. For residential properties, only complete if the owner is different than the current occupant. Required for commercial properties.

Sampling Team: Full name and company of each member of the team assessing the property (i.e., members sampling and/or completing IFF).

Field Form Check Completed by (100% of forms): To be signed, after IFF is checked by the field team member not completing the IFF.

Screening Field check Completed by (2% of forms): To be signed, after IFF is checked by the CSS task leader.

House Attributes

Property Description: Description of the property specific to the IFF being completed.

Surrounding Land Use: Description of the land use groups surrounding the property specific to the IFF being completed. Indicate all that apply.

Year of Construction: Year structure was constructed. If occupant and/or owner do not know what year the structure was complete, choose unknown.

Square Footage: Calculated from the field diagram or estimated from occupant/owner interview.

Completion of Property Information Field Form

Construction Material: Material structure is constructed from. If other than wood, masonry, or stone, choose other and provide a description.

Number of Floors Above Ground: Number of floors above ground specific to the structure that is assessed on the IFF. If other than 1, 2, or 3, provide number of floors in blank. The number of floors above ground should include the attic only if it is used as a living space.

Number of Rooms Per Floor Above Ground: Number of rooms per floor that is above ground. Enter number of rooms per floor next to the floor number. If more than three floors are present, provide the information on the blank.

Basement: If a basement is present, choose yes. If a basement is not present, choose no. Basement refers to a room below ground level that a person can enter and stand upright (i.e., a crawl space is not a basement).

Heating Source: Method by which heat is produced in the structure. If a method other than wood/coal, electric, or propane/gas is used as a heating source, choose other and provide a description.

Heat Distribution: Method by which heat is distributed throughout the structure. Occupant and/or owner should be able to provide this information.

Occupant Information

Number of Adults/Employees: For residences, provide the number of adults that live at the residence; for a commercial property, provide the number of employees that work in the structure.

Number of Children: For residences, provide the number of children living there or visiting a commercial property for an extended period of time per day. ~~for a commercial property, indicate the number of children as zero.~~

Years at Location: Number of years current occupant or business has occupied the structure.

Was the residence/building remodeled? Provide yes or no as an answer. If yes, provide years since remodeling and location of remodeling. If occupant/owner is unsure, provide a note in the provided space.

Completion of Property Information Field Form

Has resident/business purchased any Libby vermiculite materials from W.R. Grace in the past? Based on occupant/owner interview. Provide yes or no as an answer. If occupant/owner is unsure, provide a note in the provided space.

Has the property at this location been used for a for-profit enterprise of distributing, treating, storing, or disposing of Libby vermiculite? Based on occupant/owner interview. Provide yes or no as an answer. If occupant/owner is unsure, provide a note in the provided space.

~~Has any present or former occupant worked at the W.R. Grace mine and/or any former processing plant?~~ Based on occupant/owner interview. Provide yes or no as an answer. If occupant/owner is unsure, provide a note in the provided space.

~~Has any present or former occupant been diagnosed with an asbestos-related disease?~~ Based on occupant/owner interview. Provide yes or no as an answer. If occupant/owner is unsure, provide a note in the provided space.

Are there any known areas of exposed vermiculite?: Base yes or no answer on occupant/owner interview and visual inspection of home. If yes, provide location of exposed vermiculite.

Indoor Assessment

Vermiculite Insulation Past or Present: Visual inspection of attic is required to answer item. If owner/occupant indicates past presence of vermiculite insulation, note in space provided and year of removal if available. Past or present presence in walls, basements, and crawl spaces can be answered from the occupant/owner interview, but this must be noted in the area provided.

Evidence of Physical Damage? Based on visual inspection of interior

Evidence of Water Damage? Based on visual inspection of interior

Evidence of vermiculite used in building materials? Based on occupant interview and/or visual inspection. If owner is unsure or visual inspection is not comprehensive, provide this information in the notes area.

Completion of Property Information Field Form

Outdoor Assessment

Libby Amphibole Sources Present: Based on visual inspection of the property. If vermiculite piles, tremolite rocks, or other primary sources are observed, provide yes as the answer. If primary sources appear absent but vermiculite is observed in garden soils or other disturbed areas, provide yes as the answer with notes in the area provided.

Proximity to Other Properties with Potential Sources of Libby Amphiboles: Based on observations of nearby properties. If near properties are known to contain potential sources of Libby amphiboles, it should be noted in this data item.

Type and Frequency of Activity Near Vermiculite Material - Indoor: Based on occupant/owner interview. Frequency of contact, duration of contact, and extent of contact are required. If no indoor vermiculite present, provide this information in the notes area.

Type and Frequency of Activity Near Vermiculite Material - Outdoor: Based on occupant/owner interview. Frequency of contact, duration of contact, and extent of contact are required. If no outdoor vermiculite present, provide this information in the notes area.

CSS Assessment

Occupant Information:

- Is there any knowledge of former miners, close relative of miners, or any highly exposed persons living or visiting the property? *Based on verbal interview.*
- Is the resident, past or present, -diagnosed with an asbestos related disease? *Based on verbal interview.*

Indoor Information:

- Does the interior have Libby vermiculite attic insulation? *Based on visual inspection.*
- Did the interior ever have Libby vermiculite attic insulation? *Based on verbal interview.*
- Are there vermiculite additives in any of the building materials? *Based on visual inspections and verbal interview.*

Outdoor Information:

- Is there any evidence of primary source material near the property? *Based on visual inspection.*

Completion of Property Information Field Form

- Could this have been tracked indoors or otherwise spread outdoors on the property? *Based on visual inspections and verbal interview.*

Overall Assessment

- Are primary source materials present at the property?: If any primary source (visible vermiculite indoors, outdoors; tremolite rocks, ZAI) are present answer question yes. If these primary sources are not present answer question no.
- Where are primary source materials located? Inside, Outside, Both, NA: NA will apply if no primary sources are present.

Additional Information

Any information concerning the presence of sources that are identified in the occupant/owner interview.

Field Diagram of Property

To include location of all structures, observed sources, and location of all disturbed areas.

Field Diagram of Primary Structure

To be completed for homes with vermiculite insulation past or present. Complete one sheet per floor and provide scale drawing of rooms.

Secondary Structure Information Field Form

All data items are discussed above. Not all items on the primary structure form are required on the secondary structure form.

Heating Source and Heating Distribution may not be applicable to a secondary structure.



Record of Deviation/ Request for Modification

to the
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File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren Title: CSS
Company: CDM Date: 6/10/02

Description of Deviation:
Change index ID# from CSS-#### to CS-####

Field Logbook and page number deviation is documented on: 100057 page 19
Reason for Deviation:
Version 2 Libby Database unable to accept CSS-#### as an index ID#

Potential Implications of this Deviation:

Duration of Deviation (circle one):
Temporary Date(s): _____
Resident address(es): _____
Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):
Section 5.4.4. Sample Labeling and identifications changes from CSS to CS

Technical Review: [Signature] Date: 6/11/02
(Volpe Project Manager or designate) does not apply to CSS

Quality Assurance Review and Approval: [Signature] Date: 6/12/02
(Quality Assurance Coordinator or designate)

Approved By: [Signature] Title: RPM Date: 6/11/02
(USEPA RPM, OSC, or SSC)



**Record of Deviation/
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Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren

Title: CSS Task Leader

Company: CDM

Date: 6/10/02

Description of Deviation:

Changed to IFF completion procedure

Field Logbook and page number deviation is documented on: 100957 page 46

Reason for Deviation:

To collect more accurate data regarding primary sources
of property

Potential Implications of this Deviation:

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See Attached

Technical Review:

(Volpe Project Manager or designate) does not apply to CSS

Date:

6/11/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date:

6/12/02

Approved By:

(USEPA RPM, OSC, or SSC)

Title:

RPM

Date:

6/11/02

Location Libby MT Date 6/10/02Project / Client Libby Asbestos Site - CSRVolpe Center EPA Region 8

A Soils Team #2: Chris Worthington and
at Bob Alexander logbook # 100071

60800 Attend morning meeting

00900 Teams depart office to begin field
work

01130 Begin completion of Modification
forms for CSR SAP. Field Change:

11 All Field Screening and Sampling
Activities EXCEPT soil sampling will be
performed by the Recon team. The IFE
will be COMPLETED by the Recon Team.

The soil team will only add sample locations
to the property sketch. Changes to SAP
Section 4.3.3.1 - Visual Inspection

Second paragraph will be completed by
the recon team.

Section 4.3.3.3 - Soil Sampling Sketch

Property will now be completed by the
recon team. Soils team will only add
sample locations to the property sketch.

Figure 4.4 - Field Team Soil Sampling
will no longer include yard sketch.

Change to Add sample locations
to property sketch.



Record of Deviation/ Request for Modification

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File approved copy with Data Manager and fax copy to SRC.**

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Klamen Title: CSS Task leader
Company: CDM Date: 6/10/02

Description of Deviation:

Rinse samples will not be collected during first week of June

Field Logbook and page number deviation is documented on: 100057 page 47

Reason for Deviation:

No lab to analyze samples

Potential Implications of this Deviation:

Delay on determining relationship between equipment blanks and aqueous
in-situ samples

Duration of Deviation (circle one):

Temporary

Date(s): 6/10/02 - until laboratory contract determined

Resident address(es): NA

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

Technical Review: [Signature]
(Volpe Project Manager or designate) does not apply to CSS

Date: 6/11/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 6/12/02

Approved By: Jim Christ. a-s-r
(USEPA RPM, OSC, or SSC)

RPM

Date: 6/11/07



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Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Whitten Title: CSS Task Leader
Company: CDM Date: 6/10/02

Description of Deviation:
Change to Soil Field Sample Data Sheet

Field Logbook and page number deviation is documented on: 100057 page 47

Reason for Deviation:
To track Field Equipment, Blanks

Potential Implications of this Deviation:
Tracking of information in Libby, VA database

Duration of Deviation (circle one):
Temporary Date(s): _____
Resident address(es): _____
Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):
See Attached.

Technical Review: [Signature] Date: 6/11/02
(Volpe Project Manager or designate) does not apply to CSS

Quality Assurance Review and Approval: [Signature] Date: 6/12/02
(Quality Assurance Coordinator or designate)

Approved By: J. J. Christensen Title: RPR Date: 6/11/02
(USEPA RFM, OSC, or SSC)

Libby MT

6/10/02

47

Libby Asbestos Site - OS

Volpe Center EPN Region 8

Rinse Samples Section 7.1 - rinse

samples will not be collected during first week of June due to lack of laboratory to conduct analysis. Rinse sample collection will be completed during first week when laboratory is available.

Field Sample Data Sheet - Category changed to include option for Field Blank (lot or equipment) to allow for better tracking of field equipment/lot blank samples.

Changes to Completion of Field Sample Data Sheet Completion Guidance Document: after location description add to category Field Blank (lot or equipment). Circle lot when lot blank collected from silica sand source, circle equipment when equipment blank collected at end of day.



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Project QAAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Deel Warren Title: CSS Task Leader
Company: CDM Date: 6/10/02

Description of Deviation:
Wet area from where soil samples are collected

Field Logbook and page number deviation is documented on: 100057 pg 47
Reason for Deviation:
To reduce dust generated during soil sample collection.

Potential Implications of this Deviation:
Soils may be received wet at processing lab

Duration of Deviation (circle one):
Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):
See attached.

Technical Review: [Signature] Date: 6/14/02
(Volpe Project Manager or designate) does not apply to CSS

Quality Assurance Review and Approval: [Signature] Date: 6/12/02
(Quality Assurance Coordinator or designate)

Approved By: Jin Christensen Title: RPM Date: 6/11/02
(USEPA RRM, OSC, or SSC)

Libby MT

6/10/02

Libby Asbestos Site-CR

Volpe Center

EPA Region 8

Rinse Samples Section 7.1 - rinse samples will not be collected during first week of June due to lack of laboratory to conduct analysis. Rinse sample collection will be completed during first week when laboratory is available. (2)

Field Sample Data Sheet - Category changed to include option for Field Blank (lot or equipment) to allow for better tracking of field equipment/lot blank samples.

Changes to Completion of Field Sample Data Sheet Completion Guidance Document: after location description add to category Field Blank (lot or equipment). Circle lot when lot blank collected from silica sand source, circle equipment when equipment blank collected at end of day.



Record of Deviation/ Request for Modification to the

Libby Sampling and Quality Assurance Project Plan

**Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.**

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 6/29/02

Description of Deviation:

Structure sketches will only include approximate dimensions of the attr.

Field Logbook and page number deviation is documented on: 100057 page 108

Reason for Deviation:

The information required from the sketch is used to determine approximate volumes of vermiculite insulation, so only dimensions of the attr. are needed

Potential Implications of this Deviation:

Loss of information regarding room dimension details.

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

(1) Page 4-6 Structure sketch. The sketch will not include all floors will only include approximate dimensions of the attr. (2) see attached copy of logbook page.

Technical Review: [Signature]
(Volpe Project Manager or designate) does not apply to CSS

Date: 7/2/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 7/19/02

Approved By: [Signature] Title: RPM
(USEPA RPM, OSC, or SSC) 3282-116-PP-SAMP-15095

Date: 7/2/02

Location Libby, MT Date 6/29/02
 Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Vermiculite observed on property.

1110 - E-mail Jim Christensen regarding property at 11343 Riverside Drive, Troy to provide information for letter requested by agent.

1150 - E-mail Jeff Montero to add Lincoln County Animal Shelter to priority sampling list.

1433 - Soils team #3 begins sampling on California.

1445 - Prepare Modification Form #000038:

A sketch of the structure is only to be completed if vermiculite insulation is found in the home.

The sketch will be used by removal/remedial contractors to determine approx. volume of vermiculite, so this step was determined not to be needed for homes not containing vermiculite insulation. Also the detail required on the sketch was reduced to just require only an estimated dimensions of the attic. Changes to SAP: Page 4-6 Structure Sketch: Sketch will no longer include all floors. Sketch will approximate dimensions of the attic.

Page 7 of Completion of Property Information Field Form Guidance. There will no longer be

Location Libby, MT Date 6/29/02
 Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

one sheet completed per floor.

1502 - Prepare Modification Form #000039:

Rinsate preparation method changed to EPA 100.2.

Changes to SAP: Page 6-1 section 6.1 Analytical Methods. Rinsate preparation method changed to EPA Method 100.2 the analytical method will remain the same. Change was made so ENSL mobile Laboratory could perform the analysis.

1513 - Prepare Modification Form #000040:

Rinsate samples are collected using locally available Deionized or distilled water.

Changes to SAP: page 5-5 Section 5.4.2 2nd paragraph, 2nd to last sentence ".... locally available deionized or distilled water will be used to collect the rinsate sample."

1540 - Prepare Modification Form #000041:

The same BD#s will be used for apartment buildings or buildings with multiple businesses see page 71.

Duda



SQA#5-147113(1) Doc
6/7/02

Location Libby, MT Date 6/29/02

Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Vermiculite observed on property.

1110- E-mail Jim Christensen regarding property at 11340 Riverside Drive. Try to provide information for letter requested by agent.

1150- E-mail Jeff Montero to add Lincoln County Animal Shelter to priority sampling list.

1433- Soils team #3 begins sampling on California.

1445- Prepare Modification Form #000038:

A sketch of the structure is only to be completed if vermiculite insulation is found in the home.

The sketch will be used by removal/remedial contractors to determine approx. volume of

vermiculite, so this step was determined not to be needed for homes not containing vermiculite

insulation. Also the detail required on the sketch was reduced to just require only an

estimated dimensions of the attic. Changes to SAP: Page 4-6 Structure Sketch: Sketch will

no longer include all floors. Sketch will approximate dimensions of the attic.

Page 7 of Completion of Property Information Field Form Guidance. There will no longer be

Location Libby, MT Date 6/29/02

Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

one sheet completed per floor.

1502- Prepare Modification Form #000039:

Rinsate preparation method changed to EPA 100.2.

Changes to SAP: Page 6-1 section 6.1 Analytical Methods. Rinsate preparation

method changed to EPA Method 100.2 the analytical method will remain the

same. Change was made so ERSL mobile Laboratory could perform the analysis.

1513- Prepare Modification Form #000040:

Rinsate samples are collected using locally available Deionized or distilled

water.

Changes to SAP: page 5-5 Section 5.4.2 2nd paragraph, 2nd to last sentence

"... locally available deionized or distilled water will be used to collect the rinsate sample."

1540- Prepare Modification Form #000041:

The same BD#s will be used for apartment buildings or buildings with multiple

businesses see page 71.



Record of Deviation/
Request for Modification

to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 6/29/02

Description of Deviation:

Locally available deionized or distilled water will be used to
collect rinse samples.

Field Logbook and page number: 100057 pg 69

Reason for Deviation:

ASTM Type II water was deemed unnecessary on the contaminate
of concern in Asbestos

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages.

Technical Review: [Signature]
(Volpe Project Manager or designate) does not apply to CSS

Date: 7/2/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 7/9/02

Approved By: James Christensen
(USEPA RPM/OSC, or SSC)

Title: RPM

Date: 7/2/02

Location Libby, MT Date 6/29/02
 Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Vermiculite observed on property.

1110- E-mail Jim Christensen regarding property at 11340 Riverside Drive, Try to provide information for letter requested by agent.

1150- E-mail Jeff Montera to add Lintala County Animal Shelter to priority sampling list.

1433- Soils team #3 begins sampling on California.

1445- Prepare Modification Form #000038:

A sketch of the structure is only to be completed if vermiculite insulation is found in the home.

The sketch will be used by removal/remedial contractors to determine approx. volume of vermiculite, so this step was determined not to be needed for homes not containing vermiculite insulation. Also the detail required on the sketch was reduced to just require only an estimated dimensions of the attic. Changes to SAP: Page 4-6 Structure Sketch: Sketch will no longer include all floors. Sketch will approximate dimensions of the attic.

Page 7 of Completion of Property Information Field Form Guidance. There will no longer be

Location Libby, MT Date 6/29/02
 Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

one sheet completed per floor.

1502- Prepare Modification Form #000039:

Rinsate preparation method changed to EPA 100.2.

Changes to SAP: Page 6-1 section 6.1 Analytical Methods.

Rinsate preparation method changed to EPA Method 100.2 the analytical method will remain the same.

Change was made so EMSL mobile Laboratory could perform the analysis.

1513- Prepare Modification Form #000040:

Rinsate samples are collected using locally available Deionized or Distilled water.

Changes to SAP: page 5-5 Section 5.4.2

2nd paragraph, 2nd to last sentence

"... locally available deionized or distilled water will be used to collect the rinsate sample."

1540- Prepare Modification Form #000041:

The same BO#s will be used for apartment buildings or buildings with multiple businesses see page 71.

D. W. W.



Record of Deviation/ Request for Modification

to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 6/29/02

Description of Deviation:

More detail on the collection of RD#. The same RD# will be used for apartments or business at the same address, but the apartment # or suite # will be placed in the structure description field.
Field Logbook and page number deviation is documented on: 100057 pg 71

Reason for Deviation:

For database tracking purposes so the same address will not have multiple GIS coordinates for multiple RD#s that are in same building.

Potential Implications of this Deviation:

Improved tracking of RD#s and addresses in the Libby Database.

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

Insert paragraph into Record GIS Locations Section on page 4-8.

Technical Review: [Signature]
(Volpe Project Manager or designate) does not apply to CSS

Date: 7/2/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 7/9/02

Approved By: James Christensen
(USEPA RPM, OSC, or SSC)

Title: RPM

Date: 7/2/02

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Location Libby MT Date 6/19/02
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Nevada, Minnesota, and Dakota.
Soil Team #3: B. Hunt and B. Hiltz
Logbook # 100074 working on Louisiana Ave
Soil Team #4 - Priority Property Team:
B. Pyles, P. Opem, R. Eustice Logbook #
100073 working on priority properties
and HWY 2.

PPE - attic inspection = C, verbal interview = D,
soilsampling = ⁶⁻¹⁹⁻⁰² B

All activities will be conducted in accordance
with the Final SAP for the RLCSS Libby Asbestos
Site OU4, April 2002

0800 Attend morning meeting. Topics:
- Use same BD# for apartments at the
same address, but place apartment #
in the structure description field. Requires
completing MOD form.

0915 Receive call from David Romero (osc)
Concerning property at 26 Peliga Drive.
Mr. Romero requests dust sampling be
conducted in the ^{DW 6-19-02} basement bedroom
and laundry room

0920 Receive call from EPA Inp. Center

Dan W. Anderson



Record of Deviation/ Request for Modification to the

Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: com

Title: CSS Task leader
Date: 6/29/02

Description of Deviation:

See page 110 of Logbook 100057. Modification
to IFF form

Field Logbook and page number deviation is documented on: 100057 page 110

Reason for Deviation:

To improve consistency between form completion among
multiple persons.

Potential Implications of this Deviation:

Improved consistency for the completion of IFFs

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages. These changes will
modify the IFF completion SOP.

Technical Review:

(Volpe Project Manager or designate) does not apply to CSS

Date:

7/2/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date:

7/9/02

Approved By:

James Christensen
(USEPA RPM, OSC, L, SSC)

Title:

RPM

Date:

7/2/02

LIBBY ASBESTOS PROJECT
Contaminant Screening Study
Primary Structure and Property Assessment Information Field Form

Field Logbook No.: _____ Page No.: _____ Site Visit Date: _____
 Address: _____ Structure Description: _____
 Occupant: _____ Phone Number: _____
 Owner (if different than occupant): _____ Phone Number: _____
 Sampling Team: _____
 Field Form Check Completed by (100% of forms): _____
 Screening Field Check Completed by (2% of forms): _____

Data Item	Value	Notes
HOUSE ATTRIBUTES		
Property Description	Residential Industrial Commercial	
Surrounding Land Use	Residential Industrial Commercial School Mining Other: _____	
Year of Construction	_____ Unknown	
Square Footage		
Construction Material	Wood frame Masonry/Stone Other: _____	
Number of Floors Above Ground	1 2 3 Other: _____	
Number of Rooms Per Floor Above Ground	1: _____ 2: _____ 3: _____ Other: _____	
Basement	Yes No	
Heating Source	Wood/Coal Electric Propane/Gas Other: _____	
Heat Distribution	Forced air Radiant Other: _____	

CSS INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
OCCUPANT INFORMATION		
Number of Adults/Employees	0 1 2 3 4 5-15 16-20 21-30 >30	
Number of Children	0 1 2 3 4 Other: _____	
Years at Location	<1 1-5 5-10 10-15 >15	
Was the residence/building remodeled?	Yes No	
	If yes, When (years): <2 2-5 >5 Where: Attic Living Areas Garage Basement Other: _____	
Has resident/business purchased any Libby vermiculite materials from W.R. Grace in the past?	Yes No	
Has the property at this location been used for a for-profit enterprise of distributing, treating, storing, or disposing of Libby vermiculite?	Yes No	
Are there any known areas of exposed vermiculite?	Yes No	
	If yes, Where: Ceiling Walls Floors Attic Other: _____	

CSS INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
INDOOR ASSESSMENT		
Vermiculite Insulation Past or Present	Attic: Yes No NA Unknown Walls: Yes No NA Unknown Basement: Yes No NA Unknown Crawl Space: Yes No NA Unknown Other: _____	Visual confirmation of current presence or absence required for attic.
Evidence of Physical Damage?	Yes No	
Evidence of Water Damage?	Yes No	
OUTDOOR ASSESSMENT		
Libby Amphibole Sources Present	Garden: Yes No NA Yard: Yes No NA Stockpiles: Yes No NA Other: _____	
Proximity to Other Properties with Potential Sources of Libby Amphiboles	Next door Within same block Other: _____ Unknown	

CSS INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
EXPOSURE ASSESSMENT		
Type and Frequency of Activity Near Vermiculite Material - Indoor	Frequency: <ul style="list-style-type: none"> Once a day Once a week Once a month Once a year Not Applicable 	Not Applicable applies when no vermiculite is present on the property.
	Duration of Contact: <ul style="list-style-type: none"> <1 hour 1-2 hours 2-4 hours >4 hours Not Applicable 	
	Extent of Contact: <ul style="list-style-type: none"> Heavy Moderate Light Not Applicable 	
Type and Frequency of Activity Near Vermiculite Material - Outdoor	Frequency: <ul style="list-style-type: none"> Once a day Once a week Once a month Once a year Not Applicable 	Not Applicable applies when no vermiculite is present on the property.
	Duration of Contact: <ul style="list-style-type: none"> <1 hour 1-2 hours 2-4 hours >4 hours Not Applicable 	
	Extent of Contact: <ul style="list-style-type: none"> Heavy Moderate Light Not Applicable 	

CSS INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
CONTAMINANT SCREENING STUDY ASSESSMENT		
Occupant Information		
Is there any knowledge of former miners, close relative of miners, or any highly exposed persons living or visiting the property?	Yes No Unknown	
Is the resident, past or present, diagnosed with an asbestos related disease?	Yes No Unknown	
Indoor Information		
Does the interior have Zonolite attic insulation?	Yes No Unknown	
Did the interior ever have Zonolite attic insulation?	Yes No Unknown NA	NA applies if attic currently has ZAI.
Are there vermiculite additives in any of the building materials?	Yes No Unknown	
Outdoor Information		
Is there any evidence of primary source materials at or near the property?	Yes No Unknown	
Could this have been tracked indoors or otherwise spread outdoors on the property?	Yes No Unknown	
Overall Assessment		
Are primary source materials present at the property?	Yes No	
Where are primary source materials located?	Inside Outside Both NA	
ADDITIONAL INFORMATION _____		

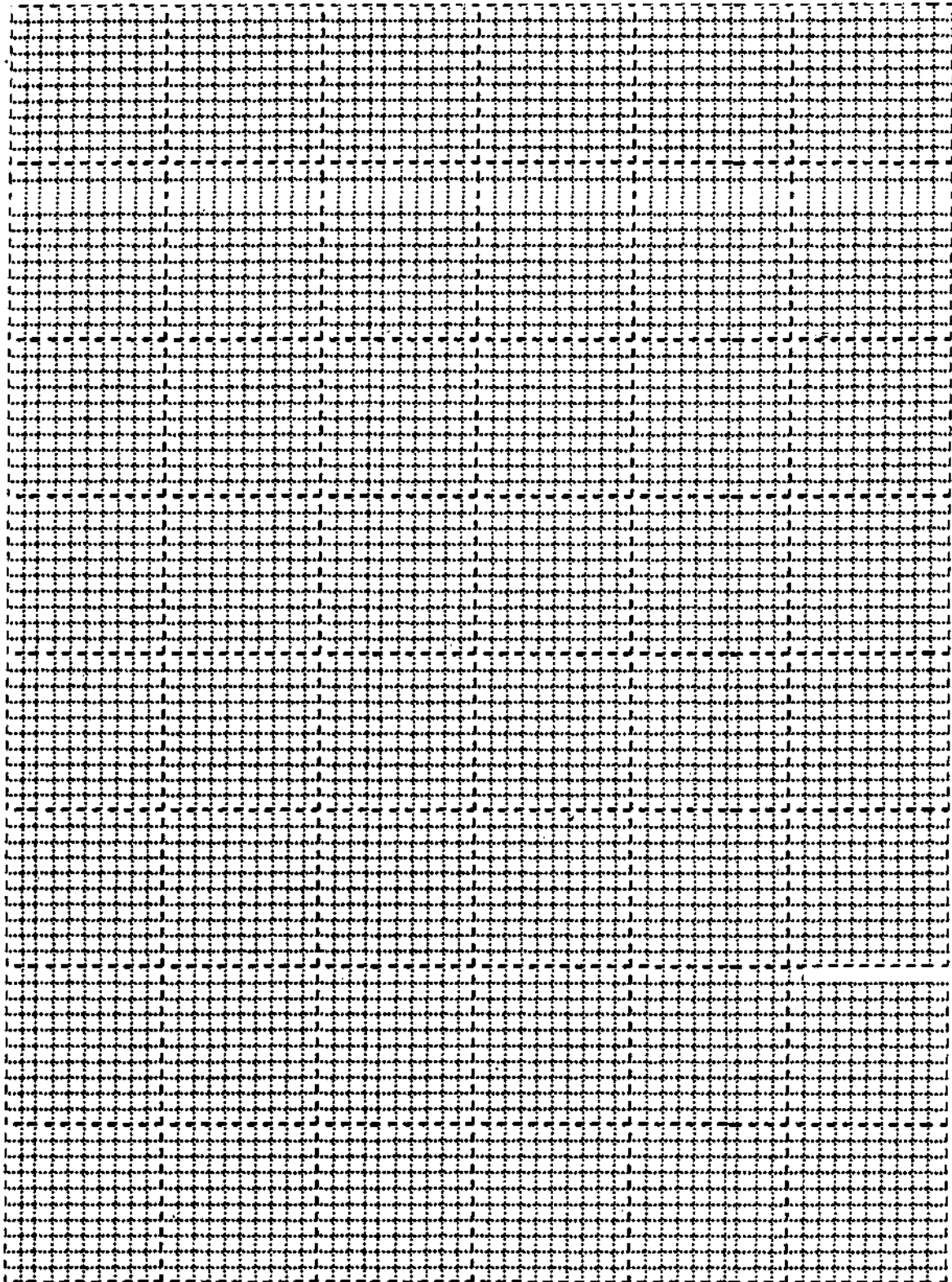
Address: _____

BD# _____

FIELD DIAGRAM OF PROPERTY

Identify important features (i.e. drainage, trees, gardens, structures, flowerbeds, utility poles, known underground utilities, suspected Libby amphibole source areas, sample locations, etc).

NOT TO SCALE



CSS INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

FIELD DIAGRAM OF PRIMARY STRUCTURE

Floor of House (circle): First Second Third Basement

Include approximate dimensions of rooms and floor covering type. Use more than one diagram if needed. Completed only if ZAI is present.

Scale: 1/10" = 1 foot

Location Libby, MTDate 6/29/02Project / Client Libby Asbestos SiteVolpe CenterEPA Region 8V1 1545 Prepare Modification Form 000042:II Version 3 of Primary Information Field Forma Following changes were made to the Form1) ① Number of Adults/Employees: 0 is addedII as an option to use when properties areI vacant.1) ② Vermiculite ~~Insulation~~ Insulation Post or PresentI Portion of the Indoor Assessment: UnknownC added as an option to ^{③ 6-29-02} all categories toII use when ^{③ 6-29-02} issue can be question can not beA answered.1) ③ Exposure Assessment: Not ApplicableI added to all categories as an option. To beC used when vermiculite is not present at theV property.b ④ Did the interior ever have Zondite atticII insulation? : Question answer NA providedI to be used if attic currently has ZAHc ⑤ Question "Is there evidence of primaryI source materials near the property?" changed toa "Is there any evidence of primary sourceI materials at or near the property?"



**Record of Deviation/
Request for Modification**

to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with: [unclear] [unclear] [unclear] [unclear] [unclear]

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 6/29/02

Description of Deviation:
Secondary Structure IFFs will be completed only when vermiculite is present in the secondary structure.

Field Logbook and page number deviation is documented on: 100057 of 11

Reason for Deviation:
Secondary IFF not need for documentation when no vermiculite is present. See protocols in operations

Potential Implications of this Deviation:
No presence or absence of vermiculite in each structure will be documented in logbook and primary IFF

Duration of Deviation (circle one):
Temporary Date(s):
Resident address(es):

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages:

Very important that it is noted on the primary that no U. was identified in 2nd structure

Technical Review: [Signature]
(Velpo Project Manager or designate) does not apply to CSS

Date: 7/29/02

Quality Assurance Review and Approval:
(Quality Assurance Coordinator or designate)

Date: 8/29/02

Approved By: [Signature]
(USEPA RRM, QAC, or SSC)

Title: RPM

Date: 8/20/02

110
Location Libby, MT Date 6/29/02
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

- ve 1545 Prepare Modification Form 000042:
III Version 3 of Primary Information Field Form.
a' Following changes were made to the Form
in ① Number of Adults/Employees: 0 is added
as an option to use when properties are
vacant. ② Vermiculite Insulation Test or Present
Portion of the Indoor Assessment: Unknown
added as an option to all categories to
use when issue can't be question can not be
answered. ③ Exposure Assessment: Not Applicable
added to all categories as an option. To be
used when vermiculite is not present at the
property. ④ Did the interpr ever have Zondite attic
insulation? Question answer NA provided
to be used if attic currently has ZAl.
⑤ Question "Is there evidence of primary
source materials near the property?" changed to
"Is there any evidence of primary source
materials at or near the property?"
1629 Prepare Modification Form 000043:
Secondary Structure IFFs are to be completed

111
Location Libby, MT Date 6/29/02
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

only if vermiculite is observed in that structure
otherwise the lack of vermiculite in a
secondary structure should be noted in the
logbook. ④

Changes to SAP: page 4 to 3rd
paragraph "... IFF will be completed for
every building located within the property
boundary." Will be change to "... IFF
will be completed for every primary
structure and secondary structures
only when vermiculite is present in the
secondary structure." ②

1700- Teams return to office to
complete paperwork.

Dee Wain
6/29/02



Record of Deviation/
Request for Modification

to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: DDM

Title: CSS Task Leader
Date: 7-15-02

Description of Deviation:

Airconox detergent is not used as part of the termination procedures and steel brusher will be used to remove gross contamination.

Field Logbook and page number deviation is documented on: 10/57 page 132

Reason for Deviation:

Asbestos is not dissolved by detergent. Therefore the use of detergent in the clean procedure is not needed.

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

Site-Specific SOP for Soil Sample Collection: see attached copy of background documentation.

Technical Review:

(Volpe Project Manager or designate) does not apply to CSS

Date: 7/19/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date: 7/19/02

Reviewed By:

(USEPA RPM, OSC, or SSC)

3282-116-PP-SAMP-16217

Libby Asbestos RI SAP

7/19/2002

Record of Deviation/Request for Modification

SQAPP modification 17.400
6/7/02

EPA Region 8

Literature

Project / Client

paragraph: "kashing should be performed by use of deionized water."

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
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Request for Modification
to the
Libby Sampling and Quality Assurance Project Plan

Instructions to Requester: Fax to contacts at bottom of form for review and approval.

Please print clearly and legibly. Do not use correction fluid or white-out.

Project WAP (circle one): re study part a (approved 5/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 7-15-02

Description of Deviation:

Soil samples will be shipped in cooler lined with garbage bags. The garbage bags will be sealed with a rustproof seal.

Field Logbook and page number deviation is documented on: 100057 page 132-133

Reason for Deviation:

Another step to insure samples are kept under proper custody until they are received at the laboratory.

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary

Date(s): _____

Resident address(es): _____

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages.

Technical Review:

(Volpe Project Manager or designate) does not apply to CSS

Date: 7/19/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date: 7/19/02

Reviewed By: J. T. Christian

(USEPA RPM, OSC, or SSC)

Title: 8/20/02 RPM

2 Location Libby MT Date 7-15-02
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

0715 Review paperwork completed 7-13-02

0800 Attend morning meeting ———— a

0900 Receive call from Information Center: Rose Woods @ 1248 Nevada 293-4724

would like to schedule an appointment.

Infor Shawn Oliveira (Recon #3) ———— @

1000 Receive call from Angela Frandsen regarding Mod form need for not using Alconox as part of decon. ———— @ 7-15-02

1027 Prepare modification form #000044

Alconox detergent w/ 7-15-02 is not being used as part of the decontamination procedures.

Modification To SAP: Site Specific SOP for Soil Sample Collection page 6, first paragraph: "Washing should be performed by use of deionized water."

1050 Relinquish 7-15-02 Fax Mod form 000044 to Angela Frandsen and George Delullo ———— a

1052 Relinquish Mod form #000044 to Terry Keller. ———— a

1055 Prepare Mod Form #000045 - samples will be shipped in cooler lined with trash bag, and trash bag will be sealed.

Modification To SAP: Page 5 to Section

DWA

3 Location Libby MT Date 7-15-02
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

5.4.6 Sample Packaging and Shipping —

- Delete modification to Section 1.5.

Procedures. ———— a

1100 Fax Mod #000045 to Angela ———— a

Frandsen and George Delullo ———— a

1107 Email Jeff Montero with modifications documented in Mod forms 44 and 45.

Modification forms 000046 and 000047 do not pertain to the CSS study and are therefore not included.



Record of Deviation/ Request for Modification to the

Libby Sampling and Quality Assurance Project Plan

**Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.**

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSB (approved 5/02)

Scenario No. (circle one): 1 2 3 4 **NA**

Requester: Dee Warren
Company: cpm

Title: CSS Task Leader
Date: 7-30-02

Description of Deviation:

Modification of Deviation:
Addition of area for recording date of soil sample collection
in the header portion of the primary IFF.

Field Logbook and page number deviation is documented on: 100091 page 19

Reason for Deviation:

Reason for Deviation: To be able to determine if Sam when sample collection occurred by looking at the IES

Potential Implications of this Deviation:

Stone

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached Logbook pages

Technical Review, [Signature]
(Voips Project Manager or designate) does not apply to CSB

Date: 7/30/6

Quality Assurance Review and Approval: 
(Quality Assurance Coordinator or designee)

Date: 8/20/02

Approved By: [Signature]
(USEPA RPM, OSC, or SSC)

Title: KFM

Date: 8/20/02

BD# _____

☐ Soil samples collected (Date: _____)

LIBBY ASBESTOS PROJECT
Contaminant Screening Study
Primary Structure and Property Assessment Information Field Form

Field Logbook No.: _____ Page No.: _____ Site Visit Date: _____

Address: _____ Structure Description: _____

Occupant: _____ Phone Number: _____

Owner (if different than occupant): _____ Phone Number: _____

Sampling Team: _____

Field Form Check Completed by (100% of forms): _____

Screening Field Check Completed by (2% of forms): _____

Data Item	Value	Notes
HOUSE ATTRIBUTES		
Property Description	Residential Industrial Commercial	
Surrounding Land Use	Residential Industrial Commercial School Mining Other: _____	
Year of Construction	_____ Unknown	
Square Footage		
Construction Material	Wood frame Masonry/Stone Other: _____	
Number of Floors Above Ground	1 2 3 Other: _____	
Number of Rooms Per Floor Above Ground	1: _____ 2: _____ 3: _____ Other: _____	
Basement	Yes No	
Heating Source	Wood/Coal Electric Propane/Gas Other: _____	
Heat Distribution	Forced air Radiant Other: _____	

Location Libby MT Date 7-30-02 19

Project/Client Libby Asbestos Site
Volpe Center EPA Region 8

0720 Check paperwork completed
on 7-29-02: Check 12 IFFs completed;
check 27 IFF-recon only; check
28 FSDS

0800 Attend morning meeting

0900 E-mail A. Frandsen with # of
forms checked @ 0720 and 2%

Checks completed 7-29-02

1200 Begin preparation of
Mod Form #000048 for new
page #1 of primary IFF form.

Modification to SAP: Completion of
Property Information Field Form
Guidance document CDM-LIBBY-04
Header information insert following
after BD#: Soil samples
collected (Date: _____) To be
completed by soils team with
the date samples are collected
specific to the location of the
BD#. To be in the form
mm/DD/YY.



Record of Deviation/ Request for Modification

000049

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.

File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9-5-02

Description of Deviation:

Require printed name of author on each page of the logbook that is
copied for placement in residential folders.

Field Logbook and page number deviation is documented on: 100091 page 97

Reason for Deviation:

Each copied page will stand alone and since these pages are
separated, the original author can be determined if a signature can not be read.

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook entry.

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 7/9/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/9/02

Approved By: Jim Christensen
(USEPA QSC or SSC)

Title: RPM

Date: 9/17/02

Location Libby MT Date 9-5-02 97
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

1 EF Soil completed = 15; 1 EF Recon
completed = 14

0800 Attend morning meeting

0845 Update team tracking

spreadsheets with numbers of
properties completed for 9-4-02.

0900 Attend weekly conference
call for project status.

1247 make phone call from
EPA call lists

1341 E-mail Angela Frandsen
with number of forms checked.

1350 Begin completion of MODIFICATION
FORMS needed for filling EPA Audit
Modification #000049 - printed name
of author on each page of a logbook
that will be copied and placed in a
residential folder.

- MOD to SOP - Requires new section
in Section 5 to describe this modification.
Also need a Project-Specific Modification
Completed for SOP 4-1



Record of Deviation/ Request for Modification

000050

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

**Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.**

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren

Title: CSS Task Leader

Company: CDM

Date: 9-8-02

Description of Deviation:

Require North arrow on figures completed on IFFs.

Field Logbook and page number deviation is documented on: 100091 pg 97 and 98

Reason for Deviation:

To require north arrow on figures to help with orientation during
soil sampling

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook entry

Technical Review:

(Volpe Project Manager or designate)

Date:

9/9/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date:

9/9/02

Approved By:

(USEPA OSC or SSC)

Title:

RPM

Date:

9/17/02

Location Libby MT Date 9-5-02 97
Project / Client: Libby Asbestos Site
Valpe Center EPA Region 8

1 FF Soil completed = 15; 1 FF Recon
completed = 14

0800 Attend morning meeting

0845 Update Team tracking

spreadsheets with numbers of
properties completed for 9-4-02

0900 Attend weekly conference
call for project status

1247 Make phone call from
EPA call lists

1341 E-mail Angela Frandsen
with number of forms checked

1350 Begin completion of MODIFICATION
FORMS needed following EPA Audit
Modification #000049 - printed name
of author on each page of a logbook
that will be copied and placed in a
residential folder.

- MOD to SOP - Requires new section
in Section 5 to describe this modification.
Also need a Project-Specific Modification
Completed for SOP 4-1

Modification #000050 - require north
arrow to be included on property sketches

DeWane

98

Location

Libby MT

Date

9-5-02

Project / Client

Libby Ashcroft Site

Volpe Center

EPA Region 8

Completed on IFFs

-MOD TO SAP add to Field Diagram of
Property instructions page 2 of Completion
of Property IFF. "To include north arrow."
Also add to top of Page 6 on IFF
Identify important features (i.e. north arrow).



Record of Deviation/ Request for Modification

000051

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.

File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9-5-02

Description of Deviation:

Determination of primary source volumes and product percentage as described in Section 4.3.3.1 page 4-3 paragraph 2 has not and will not be done

Field Logbook and page number deviation is documented on: 100091 pg 98

Reason for Deviation:

Field observations completed during reconnaissance and sampling can not accurately answer gather this information accurately

Potential Implications of this Deviation:

Volume estimator for removal determinations based on CSS information will only be gross estimator

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 9/9/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/9/02

Approved By: J. Christensen
(USEPA OSC or SSC)

Title: RPM

Date: 9/17/02

98

Location Libby MT Date 9-9-02Project / Client Libby Asbestos SiteVolpe Center EPA Region 8

Completed on IFFs

-MOD TO SAP add to Field Diagram of Property instructions page 7 of Completion of Property IFF "To include north arrow."

Also add to top of Page 6 on IFF

Identify Important features (i.e. north arrow)

Modification 000051: Determination of approximate volume by estimation, and percentage of product as described in Section 4.3.3.1 page 4-5 paragraph 2 will not be done.

-MOD TO SAP ~~remove~~ ⁹⁻⁵⁻⁰² Third sentence of second paragraph: "Lasting ⁹⁻³⁻⁰² The field team will record the location of contaminate sources on the IFF and in the logbook."



Record of Deviation/ Request for Modification

000052

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9/5/02

Description of Deviation:
IFFs are mailed to Volpe weekly instead of faxed daily

Field Logbook and page number deviation is documented on: 100091 pg 98

Reason for Deviation:
Number of pages to fax everyday can not be done efficiently.

Potential Implications of this Deviation:
IFFs are received upto seven days after they are completed.

Duration of Deviation (circle one):
Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook page

Technical Review: [Signature] Date: 9/9/02
(Volpe Project Manager or designate)

Quality Assurance Review and Approval: [Signature] Date: 9/9/02
(Quality Assurance Coordinator or designate)

Approved By: J. Christensen Title: RPM Date: 9/17/02
(USEPA QSC or SSC)

96

Location Libby MTDate 9-5-02

Project / Client

Libby Ashbestor SiteVolpe CenterEPA Region 8

Completed on IFFs

-MOD TO SAP add to Field Diagram of Property instructions page 7 of Completion of Property IFF "To include north arrow...."

Also add to top of Page 6 on IFF Identify Important features (i.e. north arrow....)

Modification 000051: Determination of approximate volume by estimation and percentage of product as described in Section 4.3.3.1 page 4-5 paragraph 2 will not be done.

-MOD TO SAP Third sentence of Second paragraph: "In the field team will record the location of contaminate sources on the IFF and in the Logbook."

Modification 000052: IFF forms are mailed to Volpe weekly not faxed daily.

-MOD TO SAP: Section 5.5 Information Field Forms page 5-6 last sentence "An additional copy will be mailed to the Volpe Center" "mailed to the Volpe Center weekly for data entry."



Record of Deviation/ Request for Modification

000058

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9/5/02

Description of Deviation:
Use of grid, quadrant, and section numbers will not be used.
Tracking progress will be done by streets.

Field Logbook and page number deviation is documented on: 100091 pg 99

Reason for Deviation:
Current parcel information provided by the city and county does not
include all properties. It is more efficient to work on a street basis than
a grid.

Potential Implications of this Deviation:
None

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of log book page

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 9/9/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/9/02

Approved By: [Signature]
(USEPA OSC or SSC)

Title: RPM

Date: 9/17/02

Location Libby MT Date 9-5-02 99Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Modification 000053: Study Grid @ 9-5-02

Area Grid will not be used.

MOD TO SAP: Section 4.3.1.2

~~not per 9-5-02~~ not applicable and

Completion of FSDS (CDM-LIBBY-03)

page 3 omit reference to Grid, Quadrant,

Section requirement. This field 9-5-02

**Record of Deviation/
Request for Modification**

000054

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

**Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.**

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 9-5-02

Description of Deviation:

Decontamination will be ~~by~~ use a plastic brush and paper towels
maybe used to dry equipment. Also, equipment will periodically be cleaned
using alcohol.

Field Logbook and page number deviation is documented on: _____

Reason for Deviation:

Metal brushes being used were scratching equipment. Plastic
brushes will remove any asbestos but all equipment will also be cleaned
using alcohol.

Potential Implications of this Deviation:

NONE

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of log book page

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 9/9/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/9/02

Approved By: [Signature]
(USEPA OSC or SSC)

Title: RPM

Date: 9/17/02

Location Libby MT Date 9-5-02 99
Project / Client Libby Asbestos Site
Volpe Center EPA Region 8

Modification 000053: Study Grid @ 9-5-02

Area Grid will not be used aw

-MOD TO SAP: Section 4.3.1.2

~~not performed~~ @ 9-5-02 not applicable and

Completion of FSDS (CDM-LIBBY-03)

page 3 omit reference to Grid Quadrant

Section requirement. ~~This field~~ @ 9-5-02

Modification 000054: Decon procedure

~~includes~~ @ 9-5-02 includes use of

a plastic brush and paper towels to

dry equipment aw

-MOD TO SAP: Page 6 of Site Specific

SOP for Soil Sample Collection

(CDM-LIBBY-05) first paragraph

Equipment may be dried using a

paper towel aw

Equipment will be periodically cleaned

using alcohol aw



Record of Deviation/ Request for Modification

000055

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 9/9/02

Description of Deviation:

Modify FSDS to remove requirement of grid/quadrant/section

Field Logbook and page number deviation is documented on: 100091 pg 106-107

Reason for Deviation:

Grid/quadrant/section not being used

Potential Implications of this Deviation:

NONE

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook page

Technical Review:

(Volpe Project Manager or designate)

Date: 9/10/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date: 9/10/02

Approved By:

(USEPA OGC or SSC)

Title:

RPM

Date:

9/17/02



Record of Deviation/ Request for Modification

000056

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9-9-02

Description of Deviation: Changes to IFF: ^{@ 9-9-02} see attached copy of logbook page

Field Logbook and page number deviation is documented on: 100091 pg 107

Reason for Deviation: Changes to IFF needed due to other modifications

Potential Implications of this Deviation:

NONE

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See copy of logbook pages

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 9/10/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/10/02

Approved By: J. Christianse
(USEPA O&C or SSC)

Title: RPM

Date: 9/17/02



Record of Deviation/ Request for Modification

000057

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren
Company: Com

Title: CSS Task Leader
Date: 9-13-02

Description of Deviation:

Duplicate sample collection.

Field Logbook and page number deviation is documented on: 100091 pg. 76-77

Reason for Deviation:

Sample collection procedure changed (see attached letter to Jim Christiansen)

Potential Implications of this Deviation:

None

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

Field duplicate sample collection procedure added to Soil Sample collection SOP CDM-LIBBY-05

Technical Review:

(Volpe Project Manager or designate)

Date: 9/13/02

Quality Assurance Review and Approval:

(Quality Assurance Coordinator or designate)

Date:

9/13/02

Approved By:

(USEPA OSC or SSC)

Title:

9/17/02

Date:

9/17/02

Libby MT

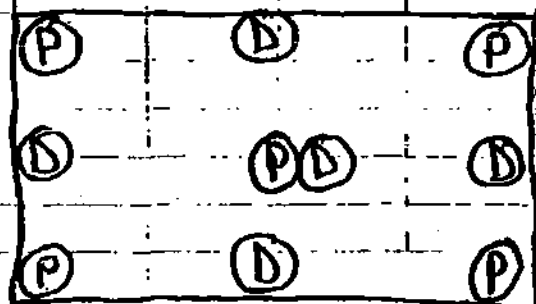
Date 8-22-02

Project / Client Libby Ashcroft Site

Volpe Center

EPA Region 8

~~will be used for planning, budgeting and pricing~~
~~Describe procedures for sample collection in this K~~
 ③ Duplicate sample prep. collection procedure does not appear to be correct. As samples are collected now, extra volume is placed in the mixing bowl and homogenized then the portion in the bowl is placed in two different bags and becomes the original sample and a duplicate. Auditor feels this is more of a split sample. Suggestion is to collect the duplicate same as co-located area sampler where sample the parent sample (P) would be collected then the duplicate sample (D) would be collected from the same land use area but ⁸⁻²²⁻⁰² not be collected adjacent to or with the parent sample but in a "random" fashion within the same area. See below figure.



P:D would be composite samples of the same

Libby MT

Date 8-22-02

Libby Ashcroft Site

Volpe Center

EPA Region 8

number of subsamples. ~~③ Sample~~
~~homogenized for 10 min 8-22-02 following~~
~~should be removed from the mixing bowl~~
~~after sample homogenization began~~
~~③ Sample collection was done~~
~~if collection time starts not~~
~~recorded until the time the sample collection~~
~~for collection begins~~
 ③ Sample collection was done until it
~~observed increments used to sample~~
~~the quantity of volume was determined~~
~~from sample. Note: The amount~~
~~needed to be included in the sample fraction~~
~~of the field data sheet. Amount needed to be~~
~~determined to quantity of~~
~~volume measured in the sample. A~~
~~sample size must be completed~~
~~with 6 maximum number of parameters~~
~~check count~~
~~15301 Close out meeting Report 1819~~
~~pages reviewed and 1555 out~~
~~sampled~~
~~1900 Report off~~
 8-22-02



28 North Last Chance Gulch
Helena, Montana 59601
tel: 406 485-1414
fax: 406 495-1025

September 13, 2002

Jim Christiansen
United States Environmental Protection Agency
999 18th Street
Denver, CO 80202

Subject: Field Duplicate Sample Collection for the Libby Asbestos Site, Remedial Investigation (RI), Contaminant Screening Study (CSS)

Dear Mr. Christiansen:

Based on comments from Mary Goldade and an independent audit performed on the CSS during August of 2002, a change will be made in the collection procedure for field duplicate samples associated with the CSS. Duplicate samples previously collected as part of the CSS were collected by splitting a homogenized sample, and collected using the same sampling equipment. Beginning September 16, 2002, field duplicate samples will be collected using the following procedure:

A parent sample will be collected from up to 5 subsamples in a given land use area. The duplicate of this sample will be collected from the same number (i.e., 5) of randomly located subsamples in the same land use area. These samples will be independently collected with separate sampling equipment. The reason for this change is to better determine the variability of sample results in a given land use area. See Figure 1.

All previously (before September 16, 2002) duplicate samples will be referred to as field splits.

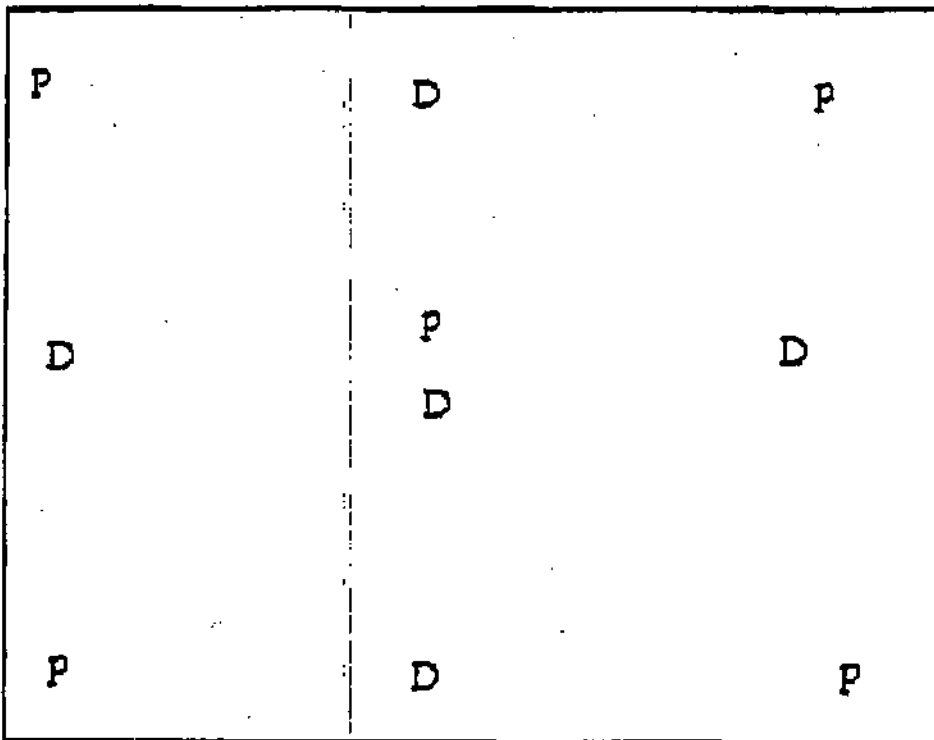
Very truly yours,

Dee Warren
CSS Task Leader
Camp Dresser & McKee Inc.
cc: Mary Goldade (EPA)
Jeff Montera (CDM)
Angela Frandsen (CDM)

Document code

Jim Christiansen
September 12, 2002
Page 2

Figure 1 Field Duplicate Sample Collection from Land Use Areas



p = Subsample locations of parent sample
D = Subsample locations of duplicate sample



Record of Deviation/ Request for Modification

000058

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.

File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00), b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 NA

Requester: Dee Warren Title: CSS Task Leader
Company: CDM Date: 9-13-02

Description of Deviation:

USE of Supplemental IFF for properties that had background information field forms completed as part of phase I dust sampling program.

Field Logbook and page number deviation is documented on: 100091 page 117-118

Reason for Deviation:

Complete IFFs are not needed for homes where a background IFF was completed under phase I

Potential Implications of this Deviation:

NONE

Duration of Deviation (circle one):

Temporary Date(s): _____
Resident address(es): _____

Permanent (complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached copy of logbook pages and supplemental IFF

Technical Review: [Signature]
(Volpe Project Manager or designate)

Date: 9/16/02

Quality Assurance Review and Approval: [Signature]
(Quality Assurance Coordinator or designate)

Date: 9/16/02

Approved By: [Signature]
(USEPA OSC or SSC)

Title: RPM

Date: 9/17/02

Location Libby MT Date 9-13-02 117
 Project / Client Libby Asbestor Site
Volpe Center EPA Region 8

~~Asbestor Site 04/11/2002~~
~~07:20 Clock paper and supplemental~~
~~form sent to EPA Region 8~~
~~IFF for forms 4-13-02~~
~~08:00 All information regarding~~
~~09:00 Completion of forms~~
~~regarding 4-13-02~~
~~collection of forms to be by book.~~
~~09:00 Form and form 000058~~
~~on~~

1011 Prepare MOD Form 000058
 Concerning completion of supplemental
 IFF for forms ⁴⁻¹³⁻⁰² properties where background
 information field forms were completed
 under the phase 1 dust sampling
 program. The supplemental IFF (SIEF)
 would capture information required on
 the CSS IFF that was not captured on
 the Phase 1 Background Information Field
 Forms (BIEF). The SIEF completed for
 the CSS will reference the original
 Phase 1 BIEF and all forms will be
 filed together in the residents folder.
 MOD TO SAP: pg 4-5 4.3.3.1

Qu Wu

118

Location Libby MTDate 9-13-02Project / Client Libby Asbestos SiteValpe CenterEPA Region 8

Visual Inspection - Insert new 3rd paragraph.
"A Supplemental IFF will be completed for properties sampled under the Phase I dust sampling program when a BIFF was completed for the property."

The procedure for completing the SIFF will follow COM-LIBBY-04 but on specific to information required on SIFF: Header information Phase Background IFF No.; Indoor Assessment; Outdoor Assessment; Vermiculite Insulation Past or Present; Outdoor Assessment; Exposure Assessment; CSS Assessment; Field Diagram of Property; Structure Sketch.

BD# _____

Phase 1 Background IFF No. _____

☐ Soil samples collected (Date: _____)**LIBBY ASBESTOS PROJECT**
Contaminant Screening Study**Primary Structure and Property Assessment Supplemental Information Field Form (SIFP)**

Field Logbook No.: _____ Page No.: _____ Site Visit Date: _____

Address: _____ Structure Description: _____

Occupant: _____ Phone Number: _____

Owner (if different than occupant): _____ Phone Number: _____

Sampling Team: _____

Field Form Check Completed by (100% of forms): _____

Screening Field Check Completed by (2% of forms): _____

Data Item	Value	Notes
INDOOR ASSESSMENT		
Vermiculite Insulation Past or Present	Attic: Yes No NA Unknown Walls: Yes No NA Unknown Basement: Yes No NA Unknown Crawl Space: Yes No NA Unknown Other: _____	Visual confirmation of current presence or absence required for attic.
OUTDOOR ASSESSMENT		
Libby Amphibole Sources Present	Garden: Yes No NA Yard: Yes No NA Stockpiles: Yes No NA Other: _____	
Proximity to Other Properties with Potential Sources of Libby Amphiboles	Next door Within same block Other: _____ Unknown	

SUPPLEMENTAL INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
EXPOSURE ASSESSMENT		
Type and Frequency of Activity Near Vermiculite Material - Indoor	Frequency: <ul style="list-style-type: none"> Once a day Once a week Once a month Once a year Not Applicable 	Not Applicable applies when no vermiculite is present on the property.
	Duration of Contact: <ul style="list-style-type: none"> <1 hour 1-2 hours 2-4 hours >4 hours Not Applicable 	
	Extent of Contact: <ul style="list-style-type: none"> Heavy Moderate Light Not Applicable 	
Type and Frequency of Activity Near Vermiculite Material - Outdoor	Frequency: <ul style="list-style-type: none"> Once a day Once a week Once a month Once a year Not Applicable 	Not Applicable applies when no vermiculite is present on the property.
	Duration of Contact: <ul style="list-style-type: none"> <1 hour 1-2 hours 2-4 hours >4 hours Not Applicable 	
	Extent of Contact: <ul style="list-style-type: none"> Heavy Moderate Light Not Applicable 	

SUPPLEMENTAL INFORMATION FIELD FORM (continued)

Address: _____

BD# _____

Data Item	Value	Notes
CONTAMINANT SCREENING STUDY ASSESSMENT		
Occupant Information		
Is there any knowledge of former miners, close relative of miners, or any highly exposed persons living or visiting the property?	Yes No Unknown	
Is the resident, past or present, diagnosed with an asbestos related disease?	Yes No Unknown	
Indoor Information		
Does the interior have Zonolite attic insulation?	Yes No Unknown	
Did the interior ever have Zonolite attic insulation?	Yes No Unknown NA	NA applies if attic currently has ZA
Are there vermiculite additives in any of the building materials?	Yes No Unknown	
Outdoor Information		
Is there any evidence of primary source materials at or near the property?	Yes No Unknown	
Could this have been tracked indoors or otherwise spread outdoors on the property?	Yes No Unknown	
Overall Assessment		
Are primary source materials present at the property?	Yes No	
Where are primary source materials located?	Inside Outside Both NA	
ADDITIONAL INFORMATION		

SUPPLEMENTAL INFORMATION FIELD FORM (continued)

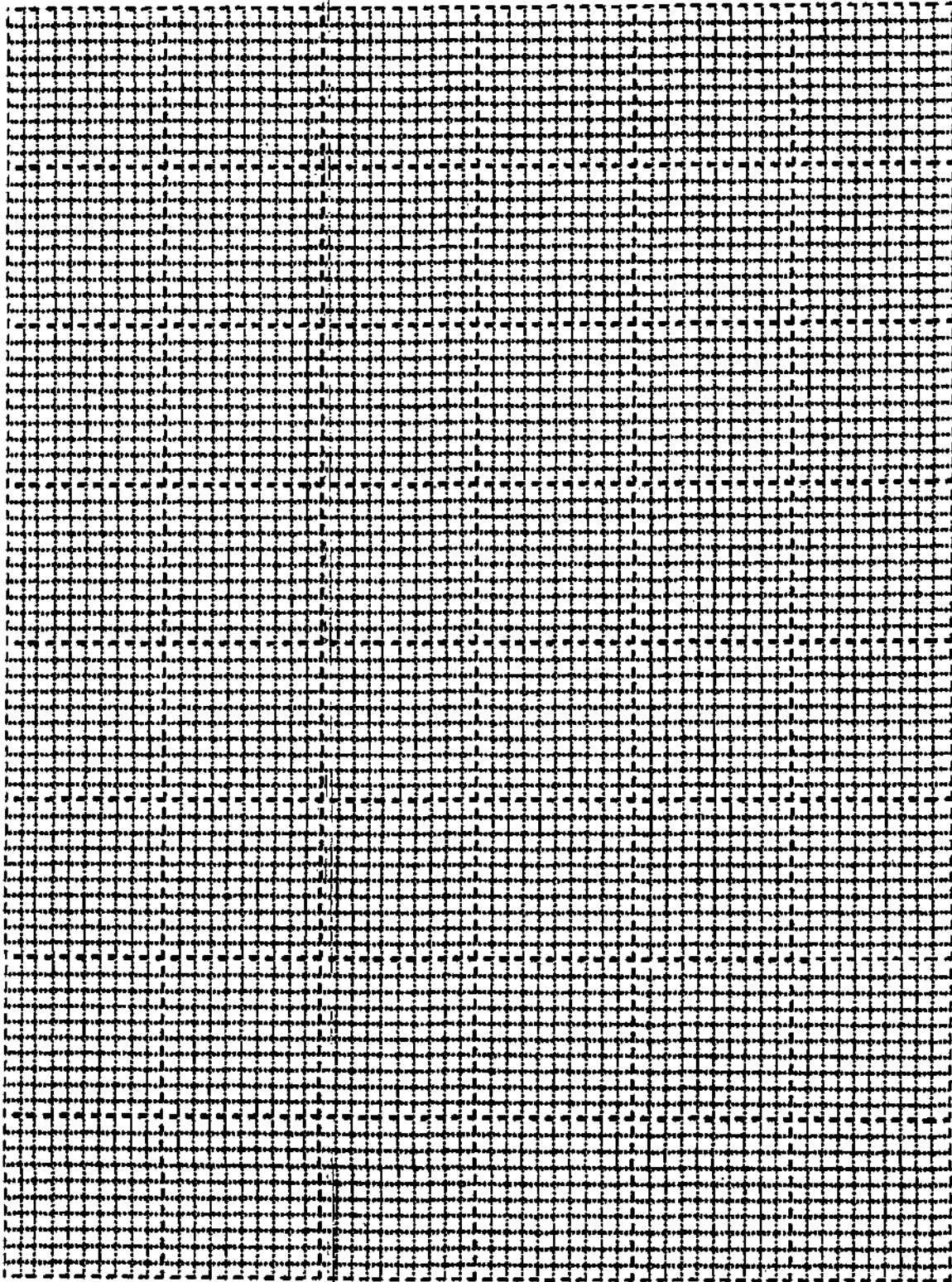
Address: _____

BD# _____

FIELD DIAGRAM OF PROPERTY

Identify important features (i.e. drainage, trees, gardens, structures, flowerbeds, utility poles, known underground utilities, suspected Libby amphibole source areas, sample locations, etc). Include north arrow.

NOT TO SCALE



SUPPLEMENTAL INFORMATION FIELD FORM (continued)

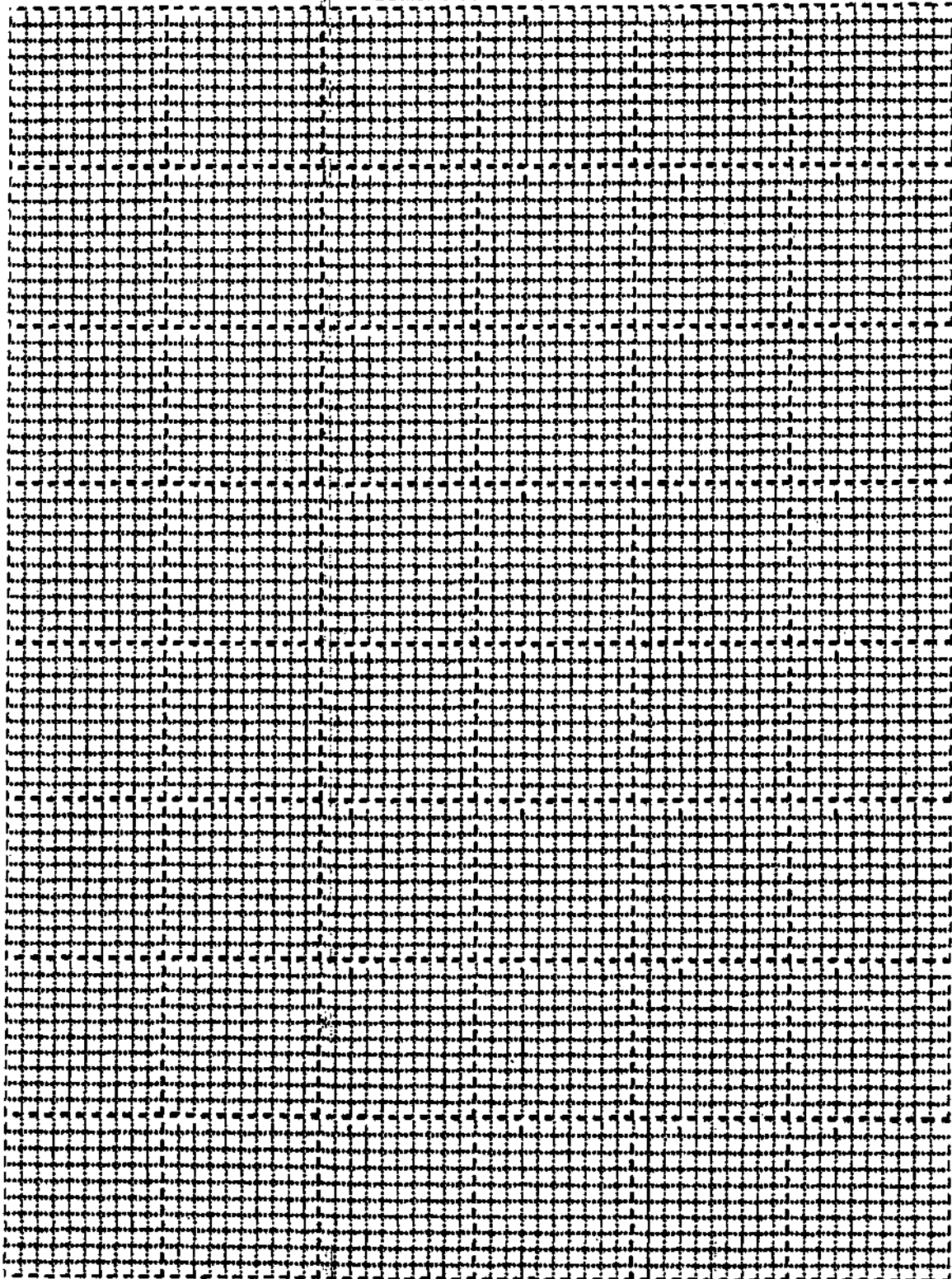
Address: _____

BD# _____

FIELD DIAGRAM OF PRIMARY STRUCTURE

Include approximate dimensions of attic. Use more than one diagram if needed. Completed only if ZAI is present.

Scale: 1/10" = 1 foot





Record of Deviation/ Request for Modification

000062

to the
Libby Sampling and Quality Assurance Project Plan
Field Activities

Instructions to Requester: Fax to contacts at bottom of form for review and approval.
File approved copy with Data Manager and fax copy to SRC.

Project QAPP (circle one): PE Study Part a (approved 6/00) b (approval pending), c (approval pending)
Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) CSS (approval 5/02)

Scenario No. (circle one): 1 2 3 4 (NA)

Requester: Dee Warren
Company: CDM

Title: CSS Task Leader
Date: 11-22-02

Description of Deviation:

Update Soil Sample Preparation SOP

Field Logbook and page number deviation is documented on: 100138 page 93

Reason for Deviation:

modification made to Soil Sample Preparation SOP
ISSI-LIBBY-01

Potential Implications of this Deviation:

None. No adverse impacts anticipated. Modifications to SOP are documented.

Duration of Deviation (circle one):

Temporary

Date(s):

Resident address(es):

Permanent

(complete Proposed Modification Section)

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable):

See attached SOP Revision

Technical Review:

David Z. [Signature]
(Volpe Project Manager or designate)

Date: 11/22/02

Quality Assurance Review and Approval:

[Signature]
(Quality Assurance Coordinator or designate)

Date: 11/22/02

Approved By:

Walter Goldade
(USEPA OSC or SSC)

Title: Project Chemist

Date: 11/26/02

Date: August 1, 2002
(Rev. 4)

SOP No. ISSI-LIBBY-01

Title: SOIL SAMPLE PREPARATION

Author William Brattin Syracuse Research Corporation^a.

SYNOPSIS: A standardized method for preparation of soil samples for asbestos analysis is described.

Received by QA Unit:

APPROVALS:

TEAM MEMBER	SIGNATURE/TITLE	DATE
<u>EPA Region 8</u>	<u>W. Goldade</u>	<u>11/12/02</u>
<u>Syracuse Research Corp.</u>	<u>W. Brattin</u>	<u>11/12/02</u>

Revision Date	Reason for Revision
1/7/99	Incorporation of sieving to the sample preparation.
7/12/00	Revision in sieve size, other minor edits.
5/7/02	Incorporate minor edits
8/1/02	Modify sieving procedure, add grinding step

(a) This SOP was originally prepared by ISSI Consulting Group. ISSI is no longer in existence, and finalization of the SOP was performed by Syracuse Research Corporation (SRC).

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide a standardized method for preparation of soil samples for analysis for asbestos. This procedure will be used by employees of USEPA Region 8 and by contractors/subcontractors supporting USEPA Region 8 projects and tasks at the Libby, Montana site. Site-specific deviations from the procedures outlined in this document must be approved by the USEPA Region 8 Remedial Project Manager or Regional Chemist prior to initiation of the sampling activity.

2.0 RESPONSIBILITIES

The Field Project Leader (FPL) may be an USEPA employee or contractor who is responsible for overseeing the surface soil sampling activities. The FPL is also responsible for checking all work performed and verifying that the work satisfies the specific tasks outlined by this SOP and the Project Plan. It is the responsibility of the FPL to communicate with the Field Personnel regarding specific collection objectives and anticipated situations that require any deviation from the Project Plan. It is also the responsibility of the FPL to communicate the need for any deviations from the Project Plan with the appropriate USEPA Region 8 Remedial Project Manager.

Field personnel performing surface soil sampling are responsible for adhering to the applicable tasks outlined in this procedure preparing surface soil samples.

3.0 EQUIPMENT

- General purpose laboratory oven - must be capable of maintaining a constant temperature of approximately 103-105°C.
- Analytical balance - accurate to 0.1 g, range of 0.1 g to 1000 g
- Jones splitter - to separate the raw field sample into two portions (archive, preparation)
- Riffle splitter - with 1/2 inch chutes to split samples
- Plate Grinder - capable of accepting soil particles of approximately 1/4 inch diameter and grinding to produce particle of approximately 250 μ m
- Stainless steel or teflon scoop or spoon - for transferring samples
- 1/4 inch stainless steel sieve and catch pan - for coarse sieving samples

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

- Sample containers - plastic ziplock bags.
- Gloves - for personal protection and to prevent cross-contamination of samples. May be plastic or latex. Disposable, powderless.
- Field clothing and Personal Protective Equipment - as specified in the Health and Safety Plan.
- Field notebook - used to record progress, any problems or observations.
- Permanent marking pen - used to label sample containers.
- Three-ring binder book - binders will contain Soil Preparation Sheets, Field Split Sample Log sheets, and sample labels.
- Trash Bag - used to dispose of gloves and wipes.

4.0 METHOD SUMMARY

Figure 1 provides an overview of the steps in this procedure. Soil samples are dried in a standard laboratory oven and split into a preparation sample and an archive sample. The preparation sample is sieved to separate coarse material ($> 1/4$ inch) from fine material ($< 1/4$ inch). The fine material is ground to a standard particle size of about 250 μm for subsequent analysis for asbestos. The coarse material is examined by stereomicroscopy to determine if any large particles of asbestos are present.

5.0 BULK SOIL DRYING

Prior to drying each sample, record the sample weight on the Sample Preparation Logbook Sheet (provided as Attachment 1).

Set the oven temperature to 103-105 $^{\circ}\text{C}$ (not to exceed 115 $^{\circ}\text{C}$). Check the oven temperature to verify that proper temperature has been reached. Place one or more samples in the oven, each sample contained in its plastic sample bag. Ensure each bag is upright to avoid spillage, and is open at the top to allow moisture to escape. Cover the bags with a layer of cheesecloth to minimize the potential for cross-sample contamination during drying. Leave the samples in the oven overnight or until completely dry. Verify that each sample is dry by testing cohesiveness using a freshly gloved thumb and forefinger. Record the weight after drying on the Sample Preparation Logbook Sheet. Document the sample drying time for each sample on the Soil Preparation Logbook Sheet.

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

6.0 DIVISION OF ARCHIVE AND PREPARATION SAMPLES

When samples are dry, remove from the oven area and allow to cool in the ventilation area.

Before placing samples in the ventilation area, verify that the hood is turned on.

Completely seal the bag, then knead the contents of the bag to break up any soil clumps.

Thoroughly mix the contents of the bag by turning the bag end-over-end slowly, for a minimum of ten times.

Divide the sample into two parts using a Jones splitter. This must be done in a hood to prevent exposure to any fibers that might be released from the sample into air.

After splitting, one part is used for sample preparation, as described below. The other part is stored as an archive sample for any potential analyses that may be required subsequently.

Identify the archive sample with the same sample label as the original sample.

Decontaminate the Jones splitter between all samples using compressed air. Brush or wipe off any visible material that is not removed by the air blast.

7.0 PREPARATION SAMPLE SIEVING

Weigh the starting mass of each preparation split sample, and record the value in the Soil Preparation Log Sheet.

Sieve each sample using a 1/4 inch stainless steel screen. Whenever possible, immediately process the fine material that passes through the screen in accord with the approach described in Section 8.2 (below). If processing cannot occur immediately, pour the fine material which passed through the sieve into a new plastic sample bag, and mark the outside of the bag with the sample ID, along with the suffix "F" (for "fine fraction").

Pour the material which does not pass through the screen into a new sample bag, and mark the outside of the bag with the sample ID, along with the suffix "C" (for "coarse fraction"). Record the weight of the coarse fraction in the Soil Preparation Log Sheet. If all of the material passes the screen (such that there is no coarse fraction), record a weight of zero for the coarse fraction on the Soil Preparation Log Sheet.

8.0 FINE SAMPLE GRINDING

8.1 Grinder Set-Up

Grinding of the dried and sieved fine soil fraction is achieved using a standard BICO vertical plate grinder. Prior to sample grinding, the plates of the vertical grinder are adjusted to produce a material with a particle size of about 250 um. Verification of proper particle size is determine

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

by initially processing a sample of quartz sand and ensuring that all material passes through a 60-mesh (250 μ m) screen. This verification of particle size should be checked approximately twice per month to account for potential wear in the plates.

8.2 Grinding of Fine Field Samples

Pass all of the fine sample (that which has passed through the 1/4 inch screen) through the plate grinder. Collect all of the sample as it emerges from the plate grinder in the catch pan. Transfer the ground material into a new ziplock plastic bag. Mark the outside of the bag with the sample ID and the suffix "FG" (for "fine fraction, ground"). Completely seal the bag, then mix by turning the bag end-over-end slowly, for a minimum of ten times.

8.3 Cleaning the Grinder

The catch pan is cleaned using a blast of high pressure air. The catch pan is then set aside and the grinder is cleaned with several blasts of compressed air. Special attention is paid to areas where dust from grinding process is known to accumulate (e.g., between the plates and areas adjacent to the catch pan clamps). The catch pan is then reattached to the grinder. A 20 g sample of quartz sand is then passed through the grinder to clean out any residual soil sample. The quartz sand is thrown out and the grinder subjected to another round of high pressure air blasts. Following this decontamination procedure, the grinder is ready to process the next sample.

9.0 SPLITTING OF THE FINE GROUND SAMPLE

Following the procedures outlined above, the fine ground soil sample should be distributed into a series of four plastic ziplock bags using a riffle splitter.

The following method for splitting a soil sample was adapted from EPA 540-R-97-028 (USEPA, 1997). With the hood turned on, open the sample bag and place the soil onto the splitter tray. Shake the tray to evenly distribute the sample. Place the long lip of the tray against the long lip of the splitter hopper and slowly rotate the tray so that the sample slowly empties into the splitter and slides down the near wall of the hopper to the chutes, collecting the sample in two receiving trays. Tap the sample tray vigorously several times to free any remaining material. Tap the splitter to facilitate the flow of all material through the chutes into the receiving trays. The corners and nooks of the splitter may be cleaned with a coarse nylon brush.

Pour the material from one of the receiving trays into a clean bucket and tap the tray vigorously to assure complete transfer. This portion of fine ground sample is designated for archive. The original sample tray (which is now empty), and the emptied receiving tray should be placed under the splitter as the new receiving trays.

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

Repeat the process of dispersing the remaining sample material (containing half the mass of the original sample) by shaking the sample tray so that it is uniformly distributed. Repeat the procedure described above for splitting the sample. At the end of the second split, carefully transfer the material from each of the receiving trays into a clean, pre-weighed sample bag to be weighed and packaged for shipment to the analytical laboratory and to W.R. Grace, as directed.

10.0 DOCUMENTATION

Each sample ID must be recorded on the data sheets. Original sample ID numbers are recorded on the Soil Preparation Sheets, and the Field Split Sample Log sheets. When the original sample is split, the original sample ID number, and each new sample, must be recorded.

In addition, a field notebook should be maintained by each individual or team that is preparing samples. For each day that samples are processed, the following information should be collected:

- date
- time
- personnel
- weather conditions
- analytical balance calibration
- drying oven temperature
- descriptions of any deviations to the Project Plan and the reason for the deviation

Field personnel will prepare the proper type and quantity of quality control samples as prescribed in the Project Plan.

11.0 QUALITY ASSURANCE

At least one preparation blank will be processed with each batch of field samples (1 blank in 20 samples). A preparation blank is a bag of clean quartz sand that is subjected to all of the same steps (drying, grinding, splitting) as the field samples. The preparation blank is assigned a random and unique index identification number and is submitted to the laboratory blind. Detection of asbestos fibers in any preparation blank (at the analytical limit of detection) should be taken as a sign of potential cross-contamination, and steps should be taken to identify and address the source of the cross contamination.

One preparation duplicate sample will be processed for every 20 field samples prepared. A preparation duplicate is a second sample of material that is prepared in the same fashion as the primary sample. The material for the preparation duplicate is obtained by using the Jones splitter to divide the preparation sample into two equal sub-parts. The preparation duplicate is assigned a unique and random sample identification number, and is submitted to the laboratory in a blind

TECHNICAL STANDARD OPERATING PROCEDURE

SOIL SAMPLE PREPARATION

fashion. Attachment 2 should be used to record the identity of any field samples that are used to prepare blind splits, along with the random sample number assigned to the split sample.

12.0 DECONTAMINATION

All non-disposable equipment used during sample preparation must be decontaminated prior to use. Stainless steel or teflon scoops or spoons, splitters, sieves and drying trays that are re-used must be decontaminated with compressed air and/or brushing off any residual material, and wiping down with disposable wipes or towels.

If soil particles are visible on any of the equipment, repeat the decontamination procedure until the equipment is clean. All equipment must be dry before it is re-used.

13.0 GLOSSARY

Project Plan - The written document that spells out the detailed site-specific procedures to be followed by the Project Leader and the Field Personnel.

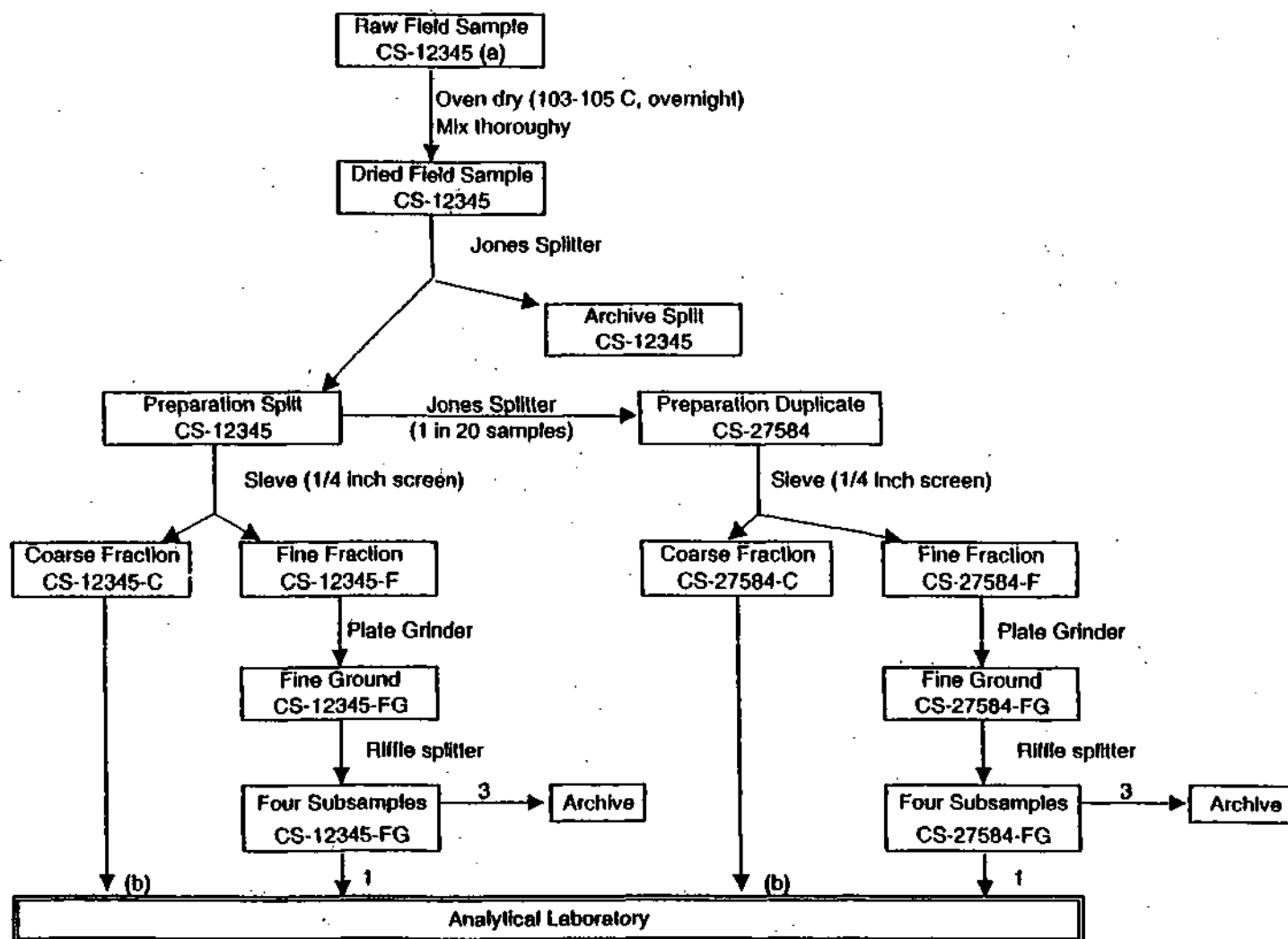
14.0 REFERENCES

American Society for Testing and Materials. 1998. Standard Practice for Reducing Samples of Aggregate to Testing Size, ASTM Designation: C 702 - 98, 4 p.

USEPA. 1997. Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials. EPA 540-R-97-028.

**TECHNICAL STANDARD OPERATING PROCEDURE
SOIL SAMPLE PREPARATION**

FIGURE 1. SOIL SAMPLE PREPARATION FLOW DIAGRAM



(a) Example sample number shown to illustrate naming conventions

(b) Coarse sample will be returned to EPA for archive after laboratory analysis

TECHNICAL STANDARD OPERATING PROCEDURE
SOIL SAMPLE PREPARATION

ATTACHMENT I

SAMPLE PREPARATION LOGBOOK SHEET

(b) At least 2 mass measurements will be recorded. The sample is completely dry if the mass measurement is stable.

TECHNICAL STANDARD OPERATING PROCEDURE
SOIL SAMPLE PREPARATION

ATTACHMENT 2
PREPARATION SPLIT LOG SHEET

TECHNICAL STANDARD OPERATING PROCEDURE
SOIL SAMPLE PREPARATION

PREPARATION SPLIT LOG SHEET Number: _____

Date	Prep. Split Sample ID	Original Sample ID	Prepared by	Notes